monitoring, at a position between the poles along a longitudinal direction of the rope, magnetic flux emanating from the cord members out through the body of the rope and associated with the magnetic circuit; and

identifying, based on the magnetic flux monitored at the position between the poles, locations along the cord members exhibiting magnetic flux leakage, wherein the locations are indicative of degradation.

2) (Twice Amended) The method according to claim 1, wherein

the magnetic circuit is created by relative movement between the rope and the magnetic poles.

4) (Twice Amended) A method of detecting and locating degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely, the method comprising

causing the rope to move at a known rate relative to a pair of magnetic poles positioned adjacent to the body of the rope and spaced longitudinally relative to the rope in order to create a partial magnetic circuit in a portion of the cord members, the partial magnetic circuit running from one of the magnetic poles longitudinally through the portion of the cord members to the other of the magnetic poles;

monitoring, at a position between the poles along a longitudinal direction of the rope, magnetic flux emanating from the cord members out through the body of the rope and associated with the magnetic circuit as a function of time; and

identifying, based on the magnetic flux monitored at the position between the poles, points in time in which the cord members exhibit magnetic flux leakage, wherein the points in time are indicative of the location of rope degradation.

5) (Twice Amended) A method for approximating tension-load bearing capacity of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely, the method comprising

creating a partial magnetic circuit in a portion of the cord members by positioning a pair of magnetic poles adjacent to the body of the rope, wherein the poles are spaced longitudinally relative to the rope so that the partial magnetic circuit runs from one of the magnetic poles longitudinally through the portion of the cord members to the other of the magnetic poles;

measuring, at a position between the poles along a longitudinal direction of the rope, magnetic flux emanating from the cord members out through the body of the rope and associated with the magnetic circuit; and

comparing, based on the magnetic flux measured at the position between the poles, measured magnetic flux leakage to predetermined data indicative of tension-load bearing capacity.

6) (Twice Amended) A method of detecting and locating degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of longitudinally extended ferromagnetic cord members is distributed transversely, the method comprising

creating a partial magnetic circuit in a portion of the cord members by positioning a pair of magnetic poles adjacent to the body of the rope, wherein the poles are spaced longitudinally relative to the rope so that the partial magnetic circuit runs from one of the magnetic poles longitudinally through the portion of the cord members to the other of the magnetic poles;

monitoring, at a position between the poles along a longitudinal direction of the rope, magnetic flux emanating from the cord members out through the body of the rope and associated with the magnetic circuit;

identifying, based on the magnetic flux monitored at the position between the poles, locations along each individual cord member exhibiting magnetic flux leakage, wherein the locations are indicative of degradation; and

correlating the locations indicative of degradation of individual cord members with respect to each other to determine relative locations of each.

10) (Twice Amended) An apparatus for detecting degradation of a rope comprising a rope body of non-ferromagnetic insulator material encasing at least one longitudinally extended ferromagnetic component, the apparatus comprising

a detector body comprising rope guide means for guiding the rope along the detector body;

a magnet fixed with respect to the body for creating a partial magnetic circuit in a portion of the ferromagnetic component of the rope that is adjacent to the detector body, the magnet comprising a pair of magnetic poles located adjacent the rope body and spaced longitudinally relative to the rope when the rope is guided along the detector body by the rope guide means so that the partial magnetic circuit runs from one of the magnetic poles longitudinally through the portion of the ferromagnetic component to the other of the magnetic poles;

magnetic flux sensing means mounted with respect to the detector body at a position between the poles for monitoring magnetic flux emanating from the ferromagnetic component out through the rope body and associated with the magnetic field; and

means for correlating the magnetic flux with rope degradation.

11) (Twice Amended) The apparatus according to claim 10, wherein

the at least one longitudinally extended ferromagnetic component comprises a plurality of ferromagnetic cord members.

32. (Twice Amended) A monitoring system for monitoring the approximate load-bearing capacity of an elevator rope having a plurality of longitudinally-extended load-bearing elements that support the tension loads of the elevator system and a jacket that encompasses the load-bearing elements, said monitoring system comprising

excitation means for exciting said load-bearing elements in a manner such that said jacket is not subject to excitation;

monitoring means for monitoring the level of excitation of each of said load-bearing elements; and

correlation means for correlating the levels of excitation with the approximate load-bearing capacity of the elevator rope.

REMARKS

Applicants request reconsideration of the subject application in view of the foregoing amendments and the following remarks.

Claims 1-33 are pending, of which claims 21-31 have been withdrawn. Claims 1, 2, 4-6, 10, 11 and 32 are amended herein to even more clearly define the invention in a manner that distinguishes over the art. Support can be found for the amendments at, for example, page 6, lines 14-26 of the original specification. No new matter has been added.

The specification has been amended to correct minor, typographical errors. No new matter has been added.

Claims 1-4, 6-20 and 33

Claims 1-4, 6-20 and 33 stand rejected under 35 USC § 103(a) as allegedly being unpatentable over Varone in view of Sasahara et al. These rejections are respectfully traversed, and reconsideration is requested.

Independent claim 1 recites a method of detecting degradation of a rope comprising a body of non-ferromagnetic insulator material in which a plurality of